

# United States Patent 1191

## Patent Number:

5,764,622

Date of Patent: [45]

Jun. 9, 1998

#### [54] RECORDING MEDIUM CARTRIDGE AND SIGNAL RECORDING APPARATUS

[75] Inventors: Ichiro Kawamura, Osaka; Ryoichi Imanaka; Yoshikazu Goto, both of

Hirakata, all of Japan

[73] Assignee: Matsushita Electric Industrial Co.,

Ltd., Osaka, Japan

[21] Appl. No.: 652,053

[56]

Kawamura et al.

[22] Filed: May 23, 1996

Foreign Application Priority Data [30]

[JP] May 23, 1995 Japan ...... 7-123420 Japan ...... 8-122948 May 17, 1996 [JP]

...... G11B 23/03 [52] U.S. Cl. .

..... 369/289, 290, [58] Field of Search ......

369/291, 292; 360/132, 133, 137; 206/308.1, 308.2, 308.3, 387.1, 387.11; 220/214, 257.

References Cited

U.S. PATENT DOCUMENTS

3,990,575 11/1976 Egly et al. ...... 206/387.11

4,425,999	1/1984	MacDonald et al.; 360/133
4,475,222	10/1984	Egendorf 360/132
4,617,655	10/1986	Aldenhoven 369/291
4,755,982	7/1988	Douwes 369/291
4,805,769	2/1989	Soltis et al 206/308.2
5.012.380	4/1991	Harissis et al 360/133
5.093,823	3/1992	Ouwerkerk et al 369/291
5,150,354	9/1992	Iwata et al 369/291

#### FOREIGN PATENT DOCUMENTS

6-12814 1/1994 Japan ...... 206/308.1

Primary Examiner-Stuart S. Levy Assistant Examiner-David L. Ometz Attorney, Agent, or Firm-McDermott, Will & Emery

**ABSTRACT** 

A cartridge for housing a recording medium therein. The cartridge includes a cartridge body configured such that a signal recording apparatus can record a signal onto the recording medium when the cartridge is loaded in the signal recording apparatus. The cartridge also includes an opening in the cartridge body for removing the recording medium from the cartridge body, and a cover covering the opening. An indicator on the cartridge body indicates whether the cover has ever been opened or removed from the cartridge body.

### 5 Claims, 12 Drawing Sheets

2

